

Name: _____

Mean, Median, and Mode

Mean, median, and mode are three *measures of central tendency* (averages). Mean is what is most commonly referred to as the “average”—the sum of all of the data divided by the number of data points. Median is simply the middle number, *after all of the numbers have been **put in order***. Mode is the number that appears most often. There is always a single mean and a single median. You can, however, have more than one mode if more than one number ties for the most appearances in the data set. Sometimes, there isn’t a mode, because there is not a number that shows up more than the rest.

EXAMPLE

Data: {-3, 2, 7, 2, 5, 7}

Mean: *add them all up, and divide by the number of data points.*

$$-3 + 2 + 7 + 2 + 5 + 7 = 20$$

There are 6 numbers in the data set, so...

$$\frac{\text{sum}}{\text{total number}} = \frac{20}{6} = \frac{10}{3} \approx \boxed{3.3}$$

Median: *The middle number, once they’re put in order.*

The data, in order, is:

-3, 2, 2, *MIDDLE*, 5, 7, 7

The middle would be halfway between 2 & 5. $\frac{2+5}{2} = \frac{7}{2} = \boxed{3.5}$

Mode: *The number(s) that show up most often.*

-3, 2, 2, 5, 7, 7

2 & 7 both show up twice (more than the other numbers, which show up once). The modes are: $\boxed{\{2, 7\}}$

Determine the mean median and mode to the nearest tenth.

1. {-5, 3, 6, 8, 3}	2. {10, 8, 8, 8, 5, 1}	3. {6, 4, 1, 4, 6}
4. {-12, 18, 5, 7, 5, 2, 1, 0, 10}	5. {4, 18, 12, 4, 1, 11, 5}	6. {11, 3, 19}
7. {6, -3, -7, 4, 6, 4, -6}	8. {18, 16, -18, 2}	9. {-17, 13, 15, 2, 1, -7}

10. $\{-4, 18, -3, 12, -4\}$	11. $\{11, -1, 16, 12, 2, 11, -5\}$	12. $\{-11, 20, 12\}$
13. $\{-3, 11, -18, 16\}$	14. $\{13, 13, 13, 13, 13\}$	15. $\{-8, -14, -5, 14\}$
16. $\{-18, -3, 1, 1, -3, 16\}$	17. $\{-1, 9, 18, 15, -7\}$	18. $\{-10, 5, -19, -6, -10, 5\}$
19. $\{7, 0, 20, -5, 12, 7\}$	20. $\{-10, -13, -11, -16, 18\}$	21. $\{20, 9, 20, -14, 0\}$
22. $\{9, 17, 19, 2, -2\}$	23. $\{16, 17, -12, 4, 1\}$	24. $\{5, 5, 5, 7, 7, 7\}$